

What we claim is:

1. A method of treating a food comprising the following steps:
 - selecting a food comprising at least one strain of a culture, said strain capable of surviving a pressure treatment at a predetermined pressure and pH, and
 - subjecting the food to a treatment pressure at or below the predetermined pressure, wherein the treatment pressure reduces, delays, prevents or eliminates growth of spoilage microflora.
- 10 2. A method according to claim 1 wherein the treatment pressure is at least 350MPa.
3. A method according to claim 2 wherein the treatment pressure is at least 400MPa.
- 15 4. A method according to any one of the preceding claims wherein the food is at a pH of between 3.0 and 8.0 when subjected to the treatment pressure.
5. A method according to claim 4 wherein the pH is between 3.6 and 4.8.
- 20 6. A method according to claim 5 wherein the pH is between 4.0 and 4.6.
7. A method according to any one of the preceding claims wherein the food is a cultured dairy product.
- 25 8. A method according to claim 7 wherein the cultured dairy product is yoghurt.
9. A method according to any one of claims 1 to 6 wherein the food is selected from a yoghurt drink, dairy dessert, cottage cheese, cream cheese and cultured beverages.

10. A method according to any one of the preceding claims wherein the strain of culture is selected from:

- i) *Lactobacillus acidophilus*
- ii) *Bifidobacterium lactis*
- 5 - iii) *Streptococcus thermophilus*;
- iv) *Lactobacillus helveticus*;
- v) *Lactobacillus delbruekii subsp bulgaricus*;

or any combination thereof.

10 11. A method of treating a food, comprising the steps:

- selecting a food comprising at least one strain of a culture, said strain being a probiotic strain capable of surviving a pressure treatment at a predetermined pressure and pH, and
- subjecting the food to a treatment pressure at or below the predetermined pressure, wherein the treatment pressure reduces, delays, prevents or eliminates growth of spoilage microflora.

12. A method according to claim 11 wherein the probiotic strain is *Bifidobacterium*.

20 13. A method according to claim 12 wherein the probiotic strain is *Bifidobacterium lactis*.

14. A method according to claim 13 wherein the probiotic strain is *Bifidobacterium lactis* HN019 AGAL deposit number NM 97/09513 dated 18 August 1997.

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15. A method according to claim 11 wherein the probiotic strain is *Lactobacillus*.

16. A method according to claim 15 wherein the probiotic strain is *Lactobacillus acidophilus*.

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17. A method according to claim 16 wherein the probiotic is *Lactobacillus acidophilus* HN017 AGAL deposit number NM 97/09515 dated 18 August 1997.
18. A method according to any one of claims 11 to 17 wherein the treatment pressure
5 is at least 350MPa.
19. A method according to claim 18 wherein the treatment pressure is at least
400MPa.
- 10 20. A method according to claim 19 wherein the treatment pressure is at least
500MPa.
- 15 21. A method according to any one of claims 11 to 20 wherein the food is at a pH of
between 3.0 and 4.6 when subjected to the treatment pressure.
22. A method according to any one of claims 11 to 21 wherein the food is selected
from a yoghurt, a cultured dairy product, a beverage, a fruit juice or a vegetable
juice.
- 20 23. A method of treating a food comprising the following steps:
 - selecting a food comprising at least one strain of a protective culture, said strain capable of surviving a pressure treatment at a predetermined pressure and pH, and
 - subjecting the food to a treatment pressure at or below the predetermined pressure, wherein the treatment pressure reduces, delays, prevents or
25 eliminates growth of spoilage microflora.
24. The use of at least one bacterial strain in a food to be subjected to a treatment pressure at a predetermined pressure wherein the treatment pressure reduces,
30 delays, prevents or eliminates growth of spoilage microflora, and the bacterial strain survives, said bacterial strain being selected from:

- i) *Lactobacillus acidophilus* HN017 AGAL deposit number NM97/09515 dated 18 August 1997;
- ii) *Bifidobacterium lactis* HN019 AGAL deposit number NM97/09513 dated 18 August 1997;
- 5 - iii) *Streptococcus thermophilus*;
- iv) *Lactobacillus helveticus*;
- v) *Lactobacillus delbruekeii* subsp *bulgaricus*;
- vi) *Lactobacillus acidophilus*;
- vii) *Bifidobacterium lactis*;

10 or any combination thereof.

25. A method of treating a food comprising the following steps:
 - selecting a food comprising *Lactobacillus acidophilus* HN017 AGAL deposit number NM97/09515 dated 18 August 1997; and
 - subjecting the food to a treatment pressure of between 350MPa and 15 600MPa, at a pH of between about 3.0 and about 8.0.
26. A method of treating a food comprising the following steps:
 - selecting a food comprising *Bifidobacterium lactis* HN019 AGAL deposit number NM97/09513 dated 18 August 1997; and
 - subjecting the food to a treatment pressure of between 350MPa and 20 600MPa, at a pH of between about 3.0 and about 8.0.
27. A method according to any one of the preceding claims wherein the food is subjected to the treatment pressure for less than 10 minutes.
- 25 28. A method according to claim 27 wherein the food is subjected to the treatment pressure for about 5 minutes.
- 30 29. A method according to claim 27 wherein the food is subjected to the treatment pressure less than 5 minutes.

30. A method according to claim 29 wherein the food is subjected to the treatment pressure for about 1 minute.
- 5 31. A method according to claim 29 wherein the food is subjected to the treatment pressure for less than 1 minute.
32. A method according to claim 31 wherein the food is subjected to the treatment pressure for less than 30 seconds.
- 10 33. A method according to claim 32 wherein the food is subjected to the treatment pressure for less than 5 seconds.
34. A method according to claim 33 wherein the food is subjected to the treatment pressure for about 1 second.
- 15 35. A method according to any one of the preceding claims wherein the food is subjected to the treatment pressure at a temperature between about 0 degrees Celsius and 40 degrees Celsius.
- 20 36. A method according to claim 35 wherein the food is subjected to the treatment pressure at a temperature between about 0 degrees Celsius and 20 degree Celsius.
37. A food prepared by method according to any one of the preceding claims.
- 25 38. A food according to claim 37 wherein the food is selected from a yoghurt, a cultured dairy product, a beverage or a fruit or vegetable juice.
39. A cultured dairy product having a pH of at least 4.0 and a viable culture of at least one hundred thousand colony-forming units per gram following a pressure treatment of at least 400 MPa.

40. A cultured dairy product with a pH of at least 4.0 having a viable culture of at least one hundred thousand colony-forming units per gram following a pressure treatment of at least 450 MPa.
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41. A cultured dairy product with a pH of at least 4.0 having a viable culture of at least one hundred thousand colony-forming units per gram following a pressure treatment of at least 500 MPa.
- 10 42. A yoghurt or yoghurt drink with a pH of at least 4.0 having a viable culture of at least one hundred thousand colony-forming units per gram following a pressure treatment of at least 600 MPa.
- 15 43. A food or beverage having a viable culture count of at least one hundred thousand colony-forming units per gram of at least one strain of a probiotic bacteria following a pressure treatment of at least 400 MPa for less than 10 mins.
- 20 44. A food or beverage having a viable culture count of at least one hundred thousand colony-forming units per gram of at least one strain of a probiotic bacteria following a pressure treatment of at least 450 MPa for less than 10 mins.
45. A method according to any one of claims 1 to 36 wherein the food has been packaged prior to being subjected to the treatment pressure.
- 25 46. Food made by the method according to any one of claims 1 to 36 wherein the spoilage organisms are inhibited for an extended period of time during storage, said extended period of time being longer than that achieved by an untreated food containing a strain of culture.
- 30 47. Food according to claim 46 wherein said storage is for at least 50 days at about 4 degrees Celsius.

48. Food according to claim 46 wherein said storage is for at least 90 days at about 4 degrees Celsius.
- 5 49. Food according to claim 46 wherein said storage is for at least 15 days at 20 degrees Celsius.